

**REMARKS/ARGUMENTS**

Claims 1-21 are pending in this application. Claim 4 is allowed. Claims 1, 5, 9, 20 and 21 have been amended. Claim 2 is canceled. Upon entry of this amendment, claims 1 and 3-21 will be pending.

**Rejections under 35 USC §102**

Claims 1-3 and 11-19 are rejected as anticipated by Lee '281 (U.S. Pat. No. 6,403,281). Claim 1 is amended herein to include the limitation that **each** of the alicyclic monomers that are present in the polymer are of the formula in which all of R<sub>1</sub>-R<sub>4</sub> do not represent H at the same time, as with claim 5. The polymer taught by Lee '281 includes a monomer unit of norbornene or tetracyclododecene. Since amended claim 1 excludes the presence of such monomer unit, amended claim 1 avoids the rejection. Claims 3 and 11-19, which are ultimately dependent on amended claim 1, also contain this exclusion and therefore avoid the rejection. Accordingly, withdrawal of the rejection is respectfully requested.

Claims 1-3 and 5-19 are also rejected as anticipated by Lee '707 (U.S. Pat. No. 6,589,707). Independent product claim 1 is amended herein to include the limitation that the copolymer is derived from a mixture of monomers **consisting essentially of** the alicyclic derivative monomers, a cross-linking monomer and maleic anhydride. Independent process claim 5 is amended to include the limitation that the step of admixing is performed with a mixture of monomers **consisting essentially of** the alicyclic monomers, a cross-linking monomer, maleic anhydride and a polymerization initiator. Therefore, the scope of the amended claims is limited to the specific copolymer or step recited in the claims and those that do not materially affect the basic and novel characteristics of the claimed invention. See, e.g. MPEP § 2111.03.

Lee '707 discloses a photoresist copolymer comprising a silicon moiety, i.e. a monomer having the X moiety of formula 4. See, e.g. col. 1, lines 8-9 and col. 1, line 55 - col. 2, line 48; specifically formula 4 at col. 2, lines 35-48. Although the Examiner points out that Lee '707 teaches a copolymer with no repeating unit "b" (e.g. at col. 8, lines 3-4), it is noted that Lee

'707 also teaches that repeating unit "d" (the monomer with the silicon moiety) cannot be equal to 0, and must always be present. See, e.g. col. 7, lines 3-4. Lee '707 clearly teaches that the introduction of a monomer with a silicon moiety would materially change the characteristics of applicants' claimed copolymer. See, e.g. col. 3, lines 35-46. Therefore, Applicants submit that the copolymer taught by Lee '707 is excluded by the recitation of "consisting essentially of" in amended independent claims 1 and 5 (See, e.g. MPEP § 2111.03), and as a result, amended claims 1 and 5 avoid the rejection. Since claims 3 and 11-19 are ultimately dependent on amended claim 1 and claims 6-10 are ultimately dependent on amended claim 5, it is submitted that these dependent claims also avoid the rejection.

#### **Rejections under 35 USC §103**

Claims 20 and 21 are rejected as being obvious over Lee '281. Claims 20 and 21 are amended to include the limitation that **each** of the alicyclic monomers in the copolymer are of the formula in which all of R1-R4 do not represent H at the same time. In addition, claims 20 and 21 are amended to include the recitation of "**consisting essentially of**", thereby limiting the claims to those monomers specified therein, as described above. Since these limitations are neither taught nor suggested by Lee '281, alone or in combination with any other reference, it would not have been obvious to one skilled in the art at the time the invention was made. For this reason, withdrawal of the rejection is respectfully requested.

Claims 20 and 21 are rejected as being obvious over Lee '707. Based on the fact that Lee '707 was granted on July 8, 2003, which is after the present application's filing date of February 22, 2002, on an application with an earlier effective U.S. filing date (February 15, 2001), Lee '707 is only available as prior art under 35 U.S.C. 102(e). In accordance with 35 U.S.C. 103(c), Lee '707 is disqualified as prior art under 35 U.S.C. 103 against claims 20 and 21 since the subject matter of Lee '707 and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. The following statement is sufficient to establish such common ownership. Therefore, the rejection is overcome and withdrawal of the rejection is respectfully requested.

**Statement of Common Ownership**

The present application U.S. Ser. No. 10/080,507 and Lee et al U.S. Pat. No. 6,589,707 B2 ("Lee '707") were, at the time the invention of the present application was made, both owned by Hyundai Electronics Industries Co., Ltd.

**Double Patenting**

Claims 1-3, 11-17 and 19-21 are rejected for obviousness-type double patenting over claims 1, 4-8, 10, 12, 16-19 and 21 of Lee '281. As discussed above, amended independent claims 1, 20 and 21 all require **each** of the alicyclic monomers that are present in the copolymer to be of the formula in which all of R1-R4 do not represent H at the same time. In contrast, claims 1, 4-8, 10, 12, 16-19 and 21 of Lee '281 require that the monomer of subparagraph (ii) be present, which is shown to be an alicyclic monomer of the formula wherein all of the substituents represented by R1-R4 in the present claim 1 are H at the same time. For the reasons discussed above, the amended claims of the present application are not anticipated or obvious over Lee '281 and are therefore patentably distinct from the claims of Lee '281. Accordingly, withdrawal of the double patenting rejection over Lee' 281 is respectfully requested.

Claims 1-3, 11-13 and 20 are rejected for obviousness-type double patenting over claims 11, 16, and 18-20 of Lee '707. A terminal disclaimer in compliance with 37 CFR 1.321(c) is filed herewith. Since the present application and Lee '707 are shown to be commonly owned (see Statement of Common Ownership above), it is respectfully submitted that this terminal disclaimer overcomes the obviousness-type double patenting rejection. Withdrawal of the rejection is respectfully requested.

**Allowable Subject Matter**

Applicants wish to thank the Examiner for indicating that the subject matter of claim 4 is allowable.

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Amdt. dated December 2, 2004  
Reply to Office Action of September 9, 2004

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**CONCLUSION**

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,



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